

HOW TO... Print better photos

You've got the camera, you've got the printer – but do you have the skills?

Xavier Cortez shows you how to create pictures worthy of any frame

Modern digital cameras are capable of fantastic image quality, and inkjet printers can now rival high street prints. However, there are a few steps you can take to get more out of this equipment. If you're printing a picture to put into a frame, it's worth spending a bit of time getting the best possible quality. The skills you learn will also help you save time in the future.

First, you should stock up on photo printer paper. There are lots of varieties and brands to choose from; however, we find buying the same brand of paper as your printer can give superior results. We also recommend calibrating your monitor before you start editing photos (see our tutorial on page 205). Finally, it's worth following our 'How to... Boost colours with curves' tutorial in *Shopper* July 2005.

1 What you see onscreen might not exactly match what comes out of your printer. If your prints tend to be a little too dark or oversaturated, though, you can compensate for this using Paint Shop Pro. A clever way to diagnose your printer's colour accuracy is to print the same photo with a number of different treatments and see which one comes out best. Create a blank image by clicking File, New. Make it 21cm wide and 29.7cm high, with a resolution of 300dpi, then click OK. Click File, Open, and locate the image you want to print. Click Image, Resize, and adjust the width to 1,000 pixels, ensuring that Lock aspect ratio is ticked. Be careful not to save over the original picture at this smaller resolution, though.

2 Type Ctrl-A to select the whole image and Ctrl-C to copy it. Select your blank image by clicking its header and type Ctrl-L to paste the photo as a Layer. Select the Move Tool by typing M, then drag the photo to the top-left of the blank image. Repeat this process, filling the blank document with multiple copies of the image.

3 If the Layers palette isn't visible, press F8 to see it. Here you'll find a layer for each instance of the photo you've pasted. Click on each one to select it, then perform slightly different colour adjustments to give a useful variety. The Gamma Correction filter – under Adjust, Brightness and Contrast, Gamma Correction – is ideal for this. Process the images in steps of 0.1. You could also try the Levels, Curves or Hue/Saturation/Lightness filters. Make a note of the filter settings you applied to each picture.

4 Click the Print icon and then click Properties to access your printer's settings. Select the paper type that matches your paper best and choose the highest print resolution or quality setting available. You may want to experiment with advanced settings for improving photo prints, but initially it's best to keep these at their defaults.

Make sure your photo paper is loaded in the printer and click OK and Print to print the page. When your prints arrive in the output tray, examine them to see which version looks best. You might find that increasing the gamma to 1.2 gave the

UNDERSTANDING IMAGE AND PRINT RESOLUTION

If an image looks sharp at 300dpi, it may seem odd that printers deal in resolutions reaching into the thousands of dots per inch. However, there is logic behind it. Most digital images are 24-bit, which means that each pixel can be any one of 16.7 million (2^{24}) colours. The colour of each dot in an inkjet printer's resolution is more limited as the printer cannot control how much ink is deposited into each dot; it either squirts ink or it doesn't. To create a light magenta, it must squirt magenta ink into every other dot or every tenth dot.

If you used a print resolution of 300dpi, these patterns of primary-coloured ink dots would be clearly visible to the eye, particularly in light areas of an image where the dots are spaced far apart. However, very high print resolutions and small droplet sizes allow these dots to be sufficiently small and tightly packed to appear as smooth colour. Having a photo ink cartridge with extra pastel-coloured inks also helps, as the drops can be more tightly packed when creating lighter tones.

best results, so reopen the full-resolution image and apply the same process to it.

5 The final decision to make is the size for your final print. A resolution of 300 dots per inch (dpi) is sharp to the naked eye, but if you're printing a picture to put in a frame you can get away with 200dpi. Click Image, Resize, and, in the box that appears, untick Resample using. In the Resolution box, type the figure you want, ensuring that Pixels/Inch is selected to the right. As you do this, the print Height and Width figures update automatically. If you're printing to an A4 sheet, make sure these figures are less than 29.7x21cm, and a full centimetre less if your printer doesn't support borderless printing. If not, you can adjust them directly. Click OK to apply the resize, and Print from the File menu.

6 Click the Print icon. In the print dialog box, make sure the paper orientation (Portrait or Landscape) matches the image orientation and set the Scale to 100%. Click Properties, and apply the same settings to the printer driver as before. Then click OK and Print to print your final image. **CS**

